2.4

SF

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

January 12, 1995

MEMORANDUM

SUBJECT: QA Review for PCBs from Spokane Junkyard, Week 51

FROM: R. H. Rieck, Chemist R. H. Rieck

TO: Kevin Rochlin, Project Officer

FULL DATA REVIEW

I have reviewed the attached data package and the corresponding raw data. Based on this review, I find that the Self Evaluation Report prepared by the ESAT contractor was conducted in accordance with the Functional Guidelines, and that the data qualifiers recommended in the ESAT contractor's evaluation are appropriate.

ENVIRONMENTAL SERVICE ASSISTANCE TEAMS - ZONE 2

ESAT Region 10
ICF Technology Inc.
7411 Beach Drive East
Port Orchard, WA 98366
Phone (206) 871-8760

ICF Technology Inc.
ManTech Environmental

MEMORANDUM

DATE: January 9, 1995

TO: Gerald Muth, RPO, USEPA, Region 10
Robert Rieck, GC Supervisor, USEPA, Region 10 accepted 1-12-95 R. W. Rieck
Kevin Rochlin, Project Officer, USEPA, Region 10

FROM: Linda Karsonovich, Organic Group Leader, ESAT, Region 10

THROUGH: Barry Pepich, ESAT Team Manager, ESAT, Region 10

SUBJECT: Quality Assurance Review of PCB Analyses Results for Samples from the Spokane Junkyard, Spokane, WA site

TID#: 10-9410-509
DOC#: ESAT-10A-7737
WUD#: 1500

cc: Charles Stringer, USEPA

The quality assurance (QA) review of two water samples from the Spokane Junkyard, Spokane, WA site has been completed. These samples were analyzed for PCB using SW-846 Method 8080 (CLP-RAS) by the USEPA Region 10 Laboratory ESAT Team located in Manchester, WA. This QA review was conducted for the following samples listed by EPA sample code:

94514595 94514597

DATA QUALIFICATIONS

The following comments refer to the laboratory performance in meeting the Quality Control Specifications outlined in the CLP Data Review Guidelines 02/94, and the USEPA Region 10 Manchester Environmental Guidelines. A quantitation limit of 0.1 µg/L for water samples was specified in the Work Unit Document (WUD). The recommendations presented herein are based on the information provided for the review.

TIMELINESS - Acceptable

The technical holding time for the extraction and analysis of water samples is seven days and 40 days respectively.

All samples were extracted and analyzed within the technical holding times. No qualifiers were recommended on this basis.

INITIAL CALIBRATION - Acceptable

The percent relative standard deviation (%RSD) of the calibration factors of compounds quantified using a linear equation must be ≤20% for target compounds and ≤30% for surrogates. Compounds which are quantified using a quadratic equation must contain a minimum of five calibration levels and have a correlation coefficient of not less than 0.995.

PCB 1260 and the surrogates were within the %RSD criteria on both channels. Single point standards were injected for PCBs 1016, 1221, 1232, 1242, 1248, and 1254. No qualifiers were recommended on this basis.

CONTINUING CALIBRATION - Acceptable

The percent difference (%D) between the calculated and the true amount for each compound must not exceed ±25%. The absolute retention time of the compounds must be within the windows determined from the initial calibration. Continuing calibration analyses should be performed every 12 hours during the analytical sequence according to the method.

PCB 1260 was used for the continuing calibration check. All %D were within ±25% and all retention times were within the windows determined from the initial calibration. No qualifiers were recommended on this basis.

BLANKS - Acceptable

No contamination should be present in the method blanks. Instrument blanks should not display signs of carryover or cross contamination.

All applicable QC criteria were met as no target compounds were identified, by examination of the chromatograms, in the method blanks at or above the practical quantitation limit, or in the instrument blanks at or above $^1/_2$ the practical quantitation limit. No qualifiers were recommended on this basis.

ANALYTICAL SEQUENCE - Acceptable

Samples must be run following an initial calibration. Continuing calibration checks and instrument blanks must be run at least every 12 hours.

Continuing calibration standards and instrument blanks were run at the specified intervals. No qualifiers were recommended on this basis.

SURROGATES

The acceptance criteria for surrogate recovery is 30% to 150%.

Surrogate recoveries for the waters ranged from 17-27% for tetrachloro-m-xylene (TCMX) and 87-120% for decachlorobiphenyl (DCB). No qualifiers were recommended on the basis of the

TCMX recoveries as matrix spike recoveries indicated that the TCMX recoveries were not indicative of the PCB recovery.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE - Acceptable

Matrix spike and matrix spike duplicate (MS/MSD) recoveries should be between 50% and 150%. Relative percent differences (RPD) should be within ±30%.

Sample 94514597 was utilized for the MS and MSD analyses. The recoveries were as follows:

Compound	%R MS	%R MSD	RPD
TCMX	23%	27%	16%
Aroclor 1242	78%	77%	1%
Aroclor 1260	110%	110%	0%
DCB	110%	110%	0%

No qualifiers were recommended on this basis.

COMPOUND IDENTIFICATION - Acceptable

Compound identification is done by retention time matching of sample chromatograms to the chromatograms of authentic standards on dual dissimilar columns. The retention times of surrogates, matrix spikes, and reported compounds in each sample must be within the retention time window determined from the initial calibration.

The retention times of the surrogates and matrix spikes were within the windows set by the initial calibration. No qualifiers were recommended on this basis.

COMPOUND QUANTITATION - Acceptable

Reported results must be calculated using the standard curve or average calibration factor. Compounds reported below the detection level must be within 10% of the lowest calibration standard. Detected results should agree within ±30% RPD.

No qualifiers were recommended on this basis.

OVERALL ASSESSMENT

The data was evaluated using the guidelines set out in the quality control specifications outlined in the CLP Data Review Guidelines 02/94, and the USEPA Region 10 Manchester Environmental Guidelines. In cases wh1ere more than one qualifier was recommended, the most restrictive qualifier was recommended for application to the data. None of the data were recommended for qualification.

DATA QUALIFIER DEFINITIONS

U - The analyte was not detected at or above the reported result.

J - The analyte was positively identified. The associated numerical result is an estimate.

REJ - The data are unusable for all purposes.

N - For organic analyses there is evidence that the analyte is present in the sample.

JN - For organic analyses there is evidence that the analyte is present in this sample. The associated numerical result is an estimate.

UJ - The analyte was not detected at or above the reported estimated result.

NAF - Not analyzed for.

* - The analyte was present in the sample.

EXP - The result is equal to the number before the EXP time 10 to the power of the number after the EXP.

Manchester Environmental Laboratory

Final Report

Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected: 12/19/94
Matrix: Liquid-Total
Sample Number: 94514595
Type: Reg sample
Station Description: RBLK

Analyte	Result	Units	Qlfr
GC			
Polychlorinated Biphenyl			
PCB-1016	0.071	ug/L	U
PCB-1221	0.071	ug/L	U
PCB-1232	0.071	ug/L	U
PCB-1242	0.071	ug/L	U
PCB-1248	0.071	ug/L	U
PCB-1254	0.071	ug/L	U
PCB-1260	0.074	ug/L	U
Decachlorobiphenyl	87	%Rec	
Tetrachlorometaxylene	23	%Rec	

Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected: 12/19/94
Matrix: Liquid-Total
Sample Number: 94514597
Type: Reg sample
Station Description: MW-3

Analyte	Result	Units	Qlfr
GC			
Polychlorinated Biphenyl			
PCB-1016	0.080	ug/L	U
PCB-1221	0.080	ug/L	U
PCB-1232	0.080	ug/L	U
PCB-1242	0.080	ug/L	U
PCB-1248	0.080	ug/L	U
PCB-1254	0.080	ug/L	U
PCB-1260	0.083	ug/L	U
Decachlorobiphenyl	97	%Rec	
Tetrachlorometaxylene	19	%Rec	

Manchester Environmental Laboratory
Final Report

Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected:
Matrix: Liquid-Total
Sample Number: 94514597
Type: Matrix Spike
Station Description:

Analyte	Result	Units	Qlfr
GC			
Polychlorinated Biphenyl			
PCB-1016	0.31	ug/L	U
PCB-1221	0.31	ug/L	U
PCB-1232	0.31	ug/L	U
PCB-1248	0.31	ug/L	U
PCB-1254	0.31	ug/L	U
Decachlorobiphenyl	110	%Rec	
PCB-1242	78	%Rec	
PCB-1260	110	%Rec	
Tetrachlorometaxylene	23	%Rec	

Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected:
Matrix: Liquid-Total
Sample Number: 94514597
Type: Matrix Spike Dupl
Station Description:

Analyte	Result	Units	Qlfr
GC			
Polychlorinated Biphenyl			
PCB-1016	0.31	ug/L	U
PCB-1221	0.31	ug/L	U
PCB-1232	0.31	ug/L	U
PCB-1248	0.31	ug/L	U
PCB-1254	0.31	ug/L	U
Decachlorobiphenyl	110	%Rec	
PCB-1242	77	%Rec	
PCB-1260	110	%Rec	
Tetrachlorometaxylene	27	%Rec	

Manchester Environmental Laboratory
Final Report

Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected:
Matrix: Liquid-Total
Sample Number: BW4357
Type: Blank
Station Description:

Analyte	Result	Units	Qlfr
GC			
Polychlorinated Biphenyl			
PCB-1016	0.20	ug/L	U
PCB-1221	0.20	ug/L	U
PCB-1232	0.20	ug/L	U
PCB-1242	0.20	ug/L	U
PCB-1248	0.20	ug/L	U
PCB-1254	0.20	ug/L	U
PCB-1260	0.21	ug/L	U
Decachlorobiphenyl	100	%Rec	
Tetrachlorometaxylene	17	%Rec	

Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected:
Matrix: Liquid-Total
Sample Number: BW4357D
Type: Blank
Station Description:

Analyte	Result	Units	Qlfr
GC			
Polychlorinated Biphenyl			
PCB-1016	0.19	ug/L	U
PCB-1221	0.19	ug/L	U
PCB-1232	0.19	ug/L	U
PCB-1242	0.19	ug/L	U
PCB-1248	0.19	ug/L	U
PCB-1254	0.19	ug/L	U
PCB-1260	0.20	ug/L	U
Decachlorobiphenyl	120	%Rec	
Tetrachlorometaxylene	26	%Rec	